

**THE RELATIONSHIP BETWEEN CREATIVITY,
CAREER ASPIRATIONS, AND
PERSONALITY TYPES IN
INTERIOR DESIGN
STUDENTS**

By

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CHAPTER I

THE RESEARCH PROBLEM

Statement of Problem

The field of Interior Design is known for its creative contribution in interior enhancement to better serve the inhabitant's needs. Every interior designer possesses a certain level of creativity which may be expressed in any number of differing areas. The Preference Inventory (PI), a creativity measure, assesses traits such as desire for creative production, visualization before creation, curiosity about things, multidimensional originality (originality in many areas), mental visualization, desire for fantasy/daydreaming, and curiosity about art. The Myers-Briggs Type Indicator is a standardized instrument used to identify individuals on the variables of extroversion/introversion, sensing/intuition, thinking/feeling and perceiving/judging. Some studies have examined the correlation between the Myers-Briggs sensing/intuition score and creativity.

Previous research results have indicated that certain designers may be involved in areas of interior design for which their personalities are less well suited. It is proposed that an interior design professional could have a more rewarding career when working in the specific area for which their particular personality type and level/areas of creativity are best suited. Research from this current study will examine the correlation between Myers-Briggs scores and level/area of creativity with regards to career aspirations in the field of interior design.

Purpose and Objectives

The purpose of this study was to determine the relationship between the Myers-Briggs Type Indicator and level of creativity in junior and senior college students and their career aspirations toward the field of interior design. The specific objectives are:

1. To assess creativity, career aspirations, and personality type in interior design students.
2. To analyze the relationship between creativity level, career aspirations, and personality type.
3. To analyze the relationship between creativity level, career aspirations, and personality type in interior design students.
 - a. To compare differences in creativity level by personality type.
 - b. To compare the differences in career aspirations by personality type.
4. To analyze the personality types found in interior design students.
5. To discuss implications and make recommendations for interior design programs at the university level based on the findings of this study.

Assumptions and Limitations

1. It is assumed that the college students sampled answered truthfully to the testing instruments.
2. It is assumed that the sample used was representative of interior design college students across the United States.
3. The sample was limited to interior design students at the junior and senior levels in college and university classes.

4. Personality type was identified through the use of a self-report instrument (MBTI).

Definitions

Career Aspiration - a goal which college students are striving towards as they complete their education before entering the field.

Creativity - a self directed transformational activity to produce reality from an idea or problem.

Personality Type - refers to the identified classifications of one's own data gathering preference.

Extraversion (E) - is the personality classification that identifies individuals who prefer to focus their attention on the outer world of people and things, rather than the inner world of ideas and concepts.

Introversion (I) - is the personality classification that identifies individuals who prefer to focus their attention on the inner world of ideas and concepts, rather than the outer world of people and things.

Sensing (S) - is the personality classification that identifies individuals who prefer data gathering methods involving use of the five physical senses; sight, hearing, touch, smell, and taste.

Intuitive (N) - is the personality classification that identifies individuals who prefer data gathering methods involving a holistic, swiftly moving integration of one's own ideas and sensory impressions.

Thinking (T) - is the personality classification that identifies individuals who prefer to rationally decide through a process involving logical analysis of causes and effects.

Feeling (F) - is the personality classification that identifies individuals who prefer to rationally decide by weighing the relative importance or value of competing alternatives.

Judging (J) - is the personality classification that identifies individuals who prefers moving quickly toward decisions and enjoys organizing, planning, and structuring.

Perceiving (P) - is the personality classification that identifies individuals who prefers being curious and open to changes, keeping options open in case something better turns up.

Traditional/Judicial (SF) - an individual who exists primarily to be useful to the social units they belong to. They have a duty to give, serve, and care for others.

Troubleshooter (SP) - an individual who is impulsive, acts on whims and enjoys today, for tomorrow never comes.

Catalyst (NF) - an individual who needs to have meaning in life. They desire uniqueness and want to be recognized for this quality.

Visionary (NT) - an individual who lives in their work, even leisure time is work related. They want control over nature and to predict and explain realities.

CHAPTER II

REVIEW OF LITERATURE

Creativity

Creativity has been associated over the years with personality type. Career aspirations have more recently been correlated to personality type which presents a link between the three variables. It is the intent of the author to examine the relationship between the three variables.

Because creativity cannot be anticipated and controlled it is notoriously difficult to research. Until the 1950s it belonged more to the realm of philosophizing than empirical enquiry (Wallas, 1926; Rogers, 1970). There is still no real agreement about what constitutes a creative product or outcome (Shouksmith, 1970) and, in the absence of a well elaborated theory, much creativity research has been atheoretical and pragmatic (Pickard, 1990).

Plato saw creativity as a gift of divine inspiration, not subject to rational analysis while Aristotle stressed the technical, craft-like, rational nature of "making" (Gardner, 1988). Galton (1870) proposed a hereditary factor of intelligence with creativity as a subsidiary role. Galton devised the first mental test to assess intellectual differences in individuals. Guilford (1950) has been credited with the emergence of interest in creativity research. Paralleling earlier work in intelligence testing, investigators devised paper-and-pencil measures intended to assess creative potential. Central in such psychometric work is the assessment of "divergent" (multidirectional or open-ended) as contrasted with

"convergent" thinking; and the measuring of "ideational fluency" (the number of associations an individual can produce to a stimulus and the unusualness of those associations)(Gardner, 1988). Since the 1950s, research has increased steadily in many areas of creativity. Freeman, Butcher, and Christie (1968) classify creativity research in three main divisions, according to theoretical emphasis: (a) intelligence and abilities, the assessment of the creative individual's intelligence; (b) personality characteristics, the identification of the creative persons traits; and (c) education and training, the investigation of educational techniques conducive to the development of creative talent (Diehl, 1992).

Davis and Subkoviak (1975) researched previous creativity tests and found two concepts which have hampered accurate predictions of actual real-world creative behavior. These concepts are: creativity takes many forms and requires a general type of measuring instrument and the difficulty in isolating meaningful criteria against which to validate a test. These concepts led the two researchers to develop the How Do You Think (HDYT) creativity test. This instrument assesses attitudes, motivations, interests, values, beliefs and other personality and biographical matters strongly suspected to underlie creative behavior.

Initially, the instrument was comprised of 111 items, pulled from previous creative research. After the initial testing, the Hoyt reliability test revealed a very high (.924) score indicating that despite their great diversity, the items were measuring the same thing. The researchers discarded 9 items and the Hoyt reliability became .933. The instrument was then christened the How Do You Think. Bull (1978) used this instrument and others to form the Preference Inventory (PI) used in this study.

More recently, research in creativity has been analyzed from four perspectives: a) process (b) product, (c) place and (d) personality. Research in the area of process deals with styles of problem solving and the thought process one uses in any creative endeavor. Today, most tests of creativity which call for problem solving call for divergent thinking, or coming up with as many solutions as possible to some open-ended problem. Although there is some consensus about what constitutes a divergent thinking test, opinions differ about their validity, ranging from unqualified acceptance to unqualified rejection (Pickard, 1990).

There seems to be a growing concern about the limitations of divergent thinking tests, however, which signals that new directions in creativity research are needed. The careful generalization in the review by Barron and Harrington (1981, p.447) is probably accurate: "Some divergent thinking tests, administered under some conditions and scored by some sets of criteria, do measure abilities related to creative achievement and behavior in some domain." Few if any psychologists have attempted to refute this statement, and there is considerable evidence to support it in studies which continue to utilize divergent thinking tests as measures of a cognitive skill (McCrae, 1987). Another area of research focuses on the identification of creative products either tangible or concrete. Research in the area of environment deals with characteristics of the environment which promote a creative atmosphere (Diehl, 1992).

Personality has consistently been a subject studied in relationship to creativity. The beginnings of the research began with Freud's theory of primary and secondary process and his concept of sublimation. According to Freud (1910), conflict is the genesis of creativity deriving from the capacity of creative persons to arrive at sublimation. Freud saw sublimation as providing the

components for all cultural accomplishments, including creativity. Kris (1952) suggested regression in the service of the ego as a source of creativity. Kris stated, "Central to artistic - or indeed any other - creativeness is the relaxation of ego functions. Carl Jung proposed ideas on the reconciliation of the opposites: the dichotomies of conscious - unconscious, rational - irrational, sensation - intuition, thinking - feeling, extraversion - introversion, persona - anima, the individual versus the collective, and the archetypal images and the processes of individualization. Jung also saw creativity as springing from the unconscious. "The creative process, so far as we are able to follow it at all, consists in the unconscious activation of an archetypal image, and in elaborating and shaping this image into the finished work (Jung, 1966). Essentially two types of processes of creativity were proposed by Jung (1933). First, there is a "psychological type which deals with materials drawn from the realm of human consciousness and experience. In addition, there is a "visionary" type of creativity which stems from the unconscious. Jung further divided creativity influenced by the unconscious into "symptomatic art" which stems from the personal unconscious of the individual and "symbolic art" which stems from the collective unconscious of mankind.

When the artist or any individual is creating, as it were, under the influence of the collective unconscious, he or she becomes "Every Man".

The artist is not a person endowed with free will who seeks his own ends, but one who allows art to realize its purposes through him. As a human being he may have moods and a will and personal aims, but as an artist he is 'man' in a higher sense - he is 'collective man' - one who carries and shapes the unconscious, psychic life of mankind (Jung, 1933).

Later, Jung extended some of these concepts from the artist to creative works or good ideas in general. Jung (1971) proposed some eight categories of personality types but not one of these has a monopoly upon creativity.

People may be different psychologically yet have equal capacities to use imagination and fantasy. Some personality types, however, are more prone to be creative than others (Woodman, 1981).

MacKinnon (1962) chose not to study potential for creativity but the realization and expression of clearly identifiable personality traits for the creative individual. Certain personality traits are recognized as predictors of creative persons.

Interior design is growing as an appealing option for both a university degree and future profession. Interior design as a profession requires a high level of creativity, because the interior designer must be able to adequately solve problems related to business, interior space and client needs (Gardner and Weber, 1990). Creativity is rated as one of the competencies needed by entering professionals (Myers, 1982).

Individuals cognitive styles should be identified and "made transparent" to the student and their instructor in order to increase the effectiveness of the student's education (Martin, 1982). Any given individual can be considered to have divergent and cognitive thinking abilities, although there is some suggestion that many people have distinct preference toward one or the other cognitive style.

The cognitive styles labelled as "convergent" and "divergent" will sound familiar to designers since these concepts are well established in design theory. The design process is often described in terms of moving between the two styles of thinking, as the designer first widens his search for possible solutions (divergence) and then narrows down to evaluate and develop one preferred alternative (convergence) (Cross, 1983). The most important observation to be drawn from the discussion of "learning styles" and the "designing styles" is that both cognitive styles are necessary in design. However, the psychological

evidence suggests that people do tend to prefer one or another of the divergent/convergent cognitive styles. Design students should be helped to realize and understand their own personal preference and where they need to develop competence in order to become an all-round designer. Part of the function of design education should be to ensure that students are aware of the relevance of the two different cognitive styles, and when and how to switch from one to another (Cross, 1983).

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) has become the most widely used personality instrument for non-psychiatric populations (Devito, 1985; Lynch, 1985). The MBTI was developed through years of research based upon Carl Jung's typology (Jung, 1971). Jung's personality model was based on years of research and observations (Jung, 1933). The model describes four basic mental powers and four attitudes in which the four mental powers operate. These powers and attitudes combine to produce the sixteen preference types described by the MBTI.

According to Jung's personality theory, everyone uses four basic mental processes, which Jung referred to as sensing (S), intuition (N), thinking (T), and feeling (F). Type theory assumes that any conscious mental activity can be classified under one of the four processes. When using sensing perception (S), persons are interested in what is real, immediate, practical and observable through the senses. For those using intuitive perception (N), persons are interested in future possibilities, implicit meanings, and symbolic or theoretical patterns suggested by insight. If using Thinking judgement (T), persons rationally decide through a process of logical analysis of causes and effects.

When using feeling judgement (F), persons rationally decide by weighing the relative importance or values of competing alternatives (MacCaulley, 1977).

In Jung's (1933) work, the term attitudes is reserved for extraversion and introversion. Myers added two other preferences for orientation to the outer world: judgement and perception. Extraversion and introversion relate to the balance of a person's orientation toward the external world of objects and people or toward the internal world of concepts and ideas. Extraversion describes the attitude when a person is energized by the objects and people found in their immediate environment. Stimulation and guidance come from an awareness and reliance upon the environment. People with an extraversion preference are generally action oriented, sometimes impulsive and have an ease of communication (MacCaulley, 1987). Introversion describes an attitude where energy is drawn from the environment and consolidated in one's inner world of concepts and ideas. People with an introversion preference are interested in and rely more on enduring concepts and ideas than on transitory external events. The enjoyment of solitude and privacy is greatly valued by those of an introversion preference.

Judgement (J), can be seen as an attitude towards the outer world when a person is concerned with making decisions, seeking closure, planning and organizing activities and operations. These preference types are often characterized as organized, purposeful, and decisive. Perception (P), can be seen as an attitude toward the outer world when a person is concerned with seeing all sides of an issue, keeping their options open, being spontaneous, adaptable and curious (MacCaulley, 1987).

Once Jung's work was translated into English, it was discovered by Myers and her mother Briggs. The two ladies studied intensely and tested family and friends for over 20 years, becoming increasingly convinced of the value in

creating an "indicator" for people to match their type to an interest in a career and prevent job dissatisfaction. After World War II, Myers developed and refined a series of forms for the MBTI. During the early 1950s, she collected a sample of 5,355 medical students which she later followed up on to determine type differences in aptitude, achievement and medical speciality selection (MacCaulley, 1977). In 1962, the MBTI was published by the Educational Testing Service (ETS) only as a research instrument. ETS added the MBTI to a larger study of college students, making it possible to compare the MBTI with better-known instruments. MacKinnon began to include the MBTI in the creativity research at the University of California at Berkeley, where it continues to be used (MacKinnon, 1962).

In 1975, the MBTI was considered ready for applied use and a non-profit center for MBTI research and training was established, the Center for Application of Psychological Type. In 1979, the Association for Psychological Type, a membership organization for those interested in type, was formed. In 1977 Carskadon at Mississippi State University established a refereed journal for researchers now called The Journal of Psychological Type. In 1980, the year of Myers death, CPP published her book, Gifts Differing, which distills 60 years of insights into psychological types for professionals and the public. Five years later a revision of Myers (1962) Manual was published (Myers and MacCaulley, 1985).

The eight indicators tended to be more successful and effective when a contingency measure combined all four scales, resulting in the sixteen temperament types, rather than referring to just one indicator pair such as extravert or introvert, sensing or intuitive, thinking or feeling, or judging or perceiving. Test-retest reliability values ranged from .48 to .83 for the four major dimensions (Stricker and Ross, 1963). Stricker, Schiffman, and Ross (1965)

found the T-F scale correlated significantly with literary, musical and graphic art achievement. This finding was consistent with MacKinnon's (1962) research about creativity in architects. In a study at the Institute of Personality Assessment of Berkeley, 40 selected architects participated in a weekend retreat of testing and assessment. The results were that 50% of the architects were NF and 50% were NT.

MacKinnon (1962) also found that:

. . . writers prefer feeling, mathematicians, research scientists, and engineers prefer thinking, while architects split fifty-fifty in their preference for one or the other of the two functions. Approximately two-thirds of all our creative groups score as introverts, though there is no evidence that introverts as such are more creative than extroverts (p. 490).

MacKinnon (1962) found in further research using the MBTI with other groups that:

In contrast to an estimated 25% of the general population who are intuitive, 90% of the creative writers, 92% of the mathematicians, 93% of the research scientists, and 100% of the architects are intuitive as measured by this test (p. 489).

The MBTI measures personality factors related to creativity in assessing the architects in MacKinnon's (1962) research. Since 1962, many studies have been conducted to estimate the correlation between the MBTI scores and creativity and esthetic preferences (Buchanan and Taylor, 1986; Coan, 1978; Ireland and Kernan-Schloss, 1983; O'Haire and Marcia, 1980; Palmiere, 1972). Although the inventory does not measure interest, it has been effective in predicting or describing characteristics of different occupations.

Keirse and Bates (1978) took the 16 types of the Myers Briggs Type Indicator and grouped them into four categories according to two of the four preferences (E-I, S-N, T-F, and J-P). These four categories are Traditional Judicial (SF), Troubleshooter (SP), Catalyst (NF), and Visionary (NT). Each

category has a different focus for what they are striving for and what their ultimate goal is: Traditional/Judicial - status, Troubleshooter - freedom, Catalyst - meaning, and Visionary - power. Each day we strive towards these goals unconsciously and attempt to satisfy this goal. Our personality type and that of the category we fall within precludes explanation for why we react and behave as we do.

Career Aspirations

Many students are drawn to the field of interior design by its concept of creativity and artistic freedom. Once in the field, many succeed as highly creative individuals, as capable and innovative as any artist. Interior designers are artists using the space as their canvas. There are some interior designers who suffer career "burnout" after a relatively short period of time and leave the profession to pursue other interests. Why do they leave? Are they not as creative as their fellow peers in interior design or are they not suited temperamentally for certain areas of interior design requiring higher levels of creativity? Career counseling may be needed to assist students in selecting an area of interior design that will fully utilize their abilities and personality characteristics.

Opportunities for careers are evolving within the more traditional areas of interior design. Historically, interior designers practiced residential design, commercial design or a combination of both. Presently, interior designers are involved in a wide range of occupations within the field; retail design, hospitality design of hotels, restaurants and resorts, museum work, set/stage design, textiles, furniture, showrooms and many more. One area the profession is experiencing growth in is that of facilities management. Corporations and

companies are realizing the benefit of an "in-house" designer. Interior design curricula are creating special majors simply to train individuals in this particular profession of facilities management.

It should be possible for anyone wishing to be an interior designer to find an area of the field where they can feel challenged, productive, and satisfied. Studies have shown when there is a mismatch between personality type and occupation, an individual reports feeling tired and inadequate. According to personality type theory, the individual experiences fatigue because they are using less-preferred processes of type. Also this mismatch can cause discouragement, due to a greater expenditure of effort though the work product is likely to be of lesser quality than if the preferred processes had been utilized (Myers and MacCaulley, 1985).

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration and predict vocational choice (Dillon and Weissman, 1987). The Myers-Briggs Type Indicator is being used by an increasing number of professionals for career counseling. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. It would be prudent for persons taking the MBTI to investigate carefully occupations based in part on these associations to determine if their interests, preferences and attitudes relate to the occupation under consideration. It is a fact that the kind of person you are and how you prefer to interact with people, data, and ideas are psychological issues. Careers involve dealing with these same areas (plus things). The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Pinkney, 1983)

Studies have indicated that artistic interests and the intuition preference are related (Holland, 1985; Kramer, 1977). The literature supports a relationship between artistic interests and an intuitive personality orientation for women and men. In an experiment by Martin and Bartol (1986) the MBTI was compared to the Vocational Preference Inventory (Holland, 1978). Results indicated the higher the score on the Artistic subscale of the VPI, the higher the score on the Sensing-Intuition subscale, i.e., the closer the score is likely to be to the Intuition end of the Sensing-Intuition continuum. The sensing-intuition scale seems to be more appropriate in identifying interests in occupation (Myers and MacCaulley, 1985).

The MBTI does not specifically target a person to a particular career title. The focus of career counseling is to present an individual with options of college majors and careers related to those interests. In this way, the self concept of the student is explored and expanded by examining such intuitive characteristics as exhibiting creative potential, expressing a problem solving orientation and being imaginative (Apostal, 1991).

In this way, students drawn to interior design could be tested and directed towards that area of the field they may be best suited for. (The nature of the MBTI assessment information is directly relevant to the goal of eventual satisfaction within a career.) There are many long term benefits available with the MBTI approach, the fact remains that individuals need only take advantage of it to further their own career satisfaction. Due to the limited nature of the literature, recommendations are made for further research directly related to careers in interior design.

CHAPTER III

METHODOLOGY

The purpose of this study is to assess the relationship between creativity level, career aspirations, and personality types in interior design students. The objectives of this research are to assess creativity, career aspirations, and personality type in interior design students. Recommendations will be made for interior design programs at the university level based on the findings of this study.

Research Design

This research is a combination of non-experimental and descriptive research. "Non-experimental research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables" (Kerlinger 1986, p. 348). According to Kerlinger, random assignment cannot be used in non-experimental design.

Descriptive research is "concerned with hypothesis formulation and testing, the analysis of the relationships between non-manipulated variables, and the development of generalizations" (Best, 1981, p.24). Best also states, "descriptive research describes what is. It involves the description, recording,

analysis, and interpretation of conditions that exist. It involves some type of comparison or contrast and attempts to discover relationships between existing non-manipulated variables" (Best, 1981, p.25).

The second type of non-experimental research to be used in this study is assessment. "Assessment is a fact finding activity, describing conditions that exist at a particular time (Babbie and Wagoner, 1989). The hypothesis proposed states that intuitive individuals are more likely to be interior designers because of the artistic background in the field. Assessment research design is used only for the first objective, that of assessing creativity level, career aspirations and personality type in interior design students.

The research approach suggested is appropriate for several reasons. Studies have been conducted with the Myers-Briggs Type Indicator (MBTI), a personality assessment instrument, and identifying personality factors related to creativity. MacKinnon (1962), began some of the earliest research in creativity with the MBTI at the University of Berkeley. MacKinnon's research in assessing creativity in architects influenced others to conduct further research on the correlation of MBTI scores and creativity and esthetic preferences (Buchanan and Taylor, 1986, Coan, 1978, O'Haire and Marcia, 1980, Palmiere, 1972).

Although the MBTI does not measure interest, it has been effective in predicting or describing characteristics of different occupations. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Pinkney, 1983).

There has been little or no research conducted looking at the relationship between creativity, career aspirations, and personality type in interior design.

Though there has been research in the relationship of creativity and personality type and the relationship of career aspirations and personality type, a review of the literature does not reveal studies concerning the integration of these three areas.

Description of the Sample

"The entire group of people in a category is called a population. The smaller group selected for testing is called a sample. The sample is then used to make generalizations about the population from which it is drawn" (Touliatos and Compton, 1988, p.55)

For the purposes of this study, the population is defined as: all persons studying interior design at accredited programs in the United States in 1992. The programs were solicited for participation through telephone contact. Programs which were FIDER accredited were solicited for participation in the study by a telephone contact with a faculty member teaching in the program. The sample (n=234) consisted of students from twelve universities across the United States enrolled in junior and senior interior design studio courses. Students became the sample of convenience.

Instruments

Several instruments were used in this study to assess the areas of creativity, personality type, and career aspirations.

The Preference Inventory (Bull 1978)

The Preference Inventory (PI) was selected to assess creativity level. The PI is comprised of 53 five-point rating scale items. The items were taken from

three inventories devised and evaluated by Bull (1978). The inventory measures (a) internal sensation seeking, a form of motivation to fantasize and mentally create, (b) curiosity, and (c) a need for creative production, a measure of the urge or drive to be creatively productive. Other items in the PI measure aspects of originality and were taken from the How Do You Think test (Davis, 1975; Davis and Subkoviak, 1975).

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) (1975) was designed by Myers and Briggs based on Jung's (1971) model to help people in non-clinical populations discover their own preferences for perception and judgement. The MBTI form G self scorable version was used to assess personality type and consists of 94 questions. The MBTI measures one's preferences on four scales; (a) Extravert "E" or Introvert "I", (b) Sensing "S" or Intuition "N", (c) Thinking "T" or Feeling "F", and (d) Judging "J" or Perceiving "P". MBTI scoring generates four basic scores for each of the four preferences stemming from any combination in the four scales.

The Career Aspirations Questionnaire

The instrument to test career aspirations in interior design students was based on a survey of alumni conducted by Jackman and Bull (1990). The instrument was comprised of three sections, with the first section addressing the areas of the interior design curriculum such as, Residential Design, Business Practices, History of Art and Design, and Theory. These areas were self-rated by the student to indicate their perception of their own ability to perform in each of the areas on a one (major strength) to five (minor strength) Likert scale. The

second area addressed career interests of the student including interior design firms, architectural firms, kitchen and bath showrooms or other. The third section of the questionnaire asked the student to rate particular areas of the field of interior design they would like to work in. These were rated according to strongly agree to strongly disagree and range from residential design, commercial design, CAD, stage design, museum and other areas.

A pretest was conducted with professionals and educators in the field of interior design to determine areas of the instrument needing further revision. Once the questionnaire had been administered and scored, revisions were made, and the instrument was ready for use.

Data Collection

Sets of three instruments were mailed to professors in each of the participating FIDER accredited programs, who agreed to administer the instruments to the junior and senior studio classes. The professors were to administer the Preference Inventory (PI) first, followed by the MBTI, and the Career Aspirations Questionnaire. These were completed in one sitting with no time limit other than regularly scheduled time for studio class. Due to the fact that all instruments were self explanatory, the administrators did not need training.

The instruments were returned to the investigator for scoring and coding. PC File was used to code data for use by SAS Statistical Package.

Data Analysis

An analysis of variance was conducted on the four groups of MBTI types and the inventory factors from the Preference Inventory (PI) (Bull, 1978) used to

assess creativity. The career variables were factor analyzed for comparison with MBTI and PI.

CHAPTER IV

CREATIVITY AND PERSONALITY TYPE: IMPLICATIONS FOR ASPIRATIONS

MANUSCRIPT FOR PUBLICATION

**JOURNAL TITLE: JOURNAL OF INTERIOR DESIGN
EDUCATION AND RESEARCH**

CREATIVITY AND PERSONALITY TYPE: IMPLICATIONS FOR ASPIRATIONS

Abstract: Interior design is a profession which requires a high level of creativity. The interior designer must be able to creatively solve design problems related to interior spaces and the client's needs. Previous research has shown some evidence of certain professions scoring higher on creativity tests. Personality has long been associated with levels of creativity. This study was conducted to determine the relationship of creativity, career aspirations, and personality types in interior design students. A creativity instrument (The Preference Inventory, Bull, 1978), a personality instrument (The Myers-Briggs Type Indicator, Myers, 1975), and a career aspirations questionnaire were administered to 234 interior design majors during regular studio class time at twelve FIDER accredited universities across the United States. Results indicate a relationship between creativity and the personality type ENFP. The majority of the respondents expressed a desire to work for an interior design firm specializing in commercial/residential design. Implications would help faculty better advise students for their particular niche in the field of interior design.

Introduction

Many students are drawn to the field of interior design by its concept of creativity and artistic freedom. Once in the field, many succeed as highly creative and innovative individuals. Interior designers are artists using the space as their canvas. There are some interior designers who suffer career "burnout" after a relatively short period of time and leave the profession to pursue other interests. Why do they leave? Are they not as creative as their fellow peers in interior design, or are they not suited temperamentally for certain

areas of interior design requiring higher levels of creativity? Career counseling may assist students in selecting an area of interior design that will fully utilize their abilities and personality characteristics.

Opportunities for careers are continuing to evolve within interior design. Historically, interior designers practiced residential design, commercial design or a combination of both. Presently, interior designers are involved in a wide range of careers within the field: retail design, hospitality design of hotels, restaurants and resorts, museum work, set/stage design, lighting, textiles, furniture, showrooms and many more. Another area the profession experiencing growth in is that of facilities management. Corporations and companies are realizing the benefit of an "in-house" designer. Interior design curricula are creating options to train individuals in this particular aspect of facilities management.

It should be possible for anyone wishing to be an interior designer to find an area of the field where they are challenged, productive, and satisfied. Studies have shown when there is a mismatch between personality type and occupation, an individual reports feeling tired and inadequate (Myers and MacCaulley, 1985). According to personality type theory, the individual experiences fatigue because they are using less-preferred processes of type. Also, this mismatch can cause discouragement, due to a greater expenditure of effort and the work product is likely to be of lesser quality than if the preferred processes had been utilized (Myers and MacCaulley, 1985).

This manuscript explores the proposition that an interior design professional could have a more rewarding career when working in the specific area for which their particular personality type and level/areas of creativity are best suited. Research will examine the relationship between personality type

and level/area of creativity in regards to career aspirations in the field of interior design.

There has been little or no research conducted looking at the relationship between creativity, career aspirations, and personality type in interior design. Though there has been research in the relationship of creativity and personality type and the relationship of career aspirations and personality type, a review of the literature does not reveal studies concerning the integration of these three areas.

Review of Literature

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration and predict vocational choice (Dillon and Weissman, 1987). The Myers-Briggs Type Indicator (MBTI) is being used by an increasing number of professionals for career counseling. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. The kind of person you are and how you prefer to interact with people, data, and ideas are psychological issues. Careers involve dealing with these same issues. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Pinkney, 1983).

Studies have indicated that artistic interests and the intuition preference are related (Holland, 1985; Kramer, 1977). The literature supports a relationship between artistic interests and an intuitive personality orientation for women and men. In an experiment by Martin and Bartol (1986), the MBTI was compared to Holland's Vocational Preference Inventory (VPI) (1978). Results

indicated the higher the score on the artistic subscale of the VPI, the higher the score on the sensing-intuition subscale, i.e, the closer the score is likely to be to the intuition end of the sensing-intuition continuum. The sensing-intuition scale seems to be more appropriate in identifying interests in occupation (Myers and MacCaulley, 1985).

The MBTI does not specifically target a person to a particular career title. The focus of career counseling is to present an individual with options of college majors and careers related to those interests. In this way, the self-concept of the student is explored and expanded by examining such intuitive characteristics as exhibiting creative potential, expressing a problem solving orientation, and being imaginative (Apostal, 1991).

In this way, students drawn to interior design could be tested and directed towards that area of the field they are best suited for. The nature of the MBTI assessment information is directly relevant to the goal of eventual satisfaction within a career. There are many long-term benefits available with the MBTI approach. The fact remains that individuals need only take advantage of it to further their own career satisfaction.

Personality has consistently been a subject studied in relationship to creativity. The beginnings of the research began in the 1950s with Freud's theory of primary and secondary process and his concept of sublimation, to Kris's notions concerning regression in the service of the ego, and to Kubie's emphasis on the role of the preconscious processes in creative thought and action. Jung (1933) proposed ideas on the reconciliation of the opposites: the dichotomies of conscious - unconscious, rational - irrational, sensation - intuition, thinking - feeling, extraversion - introversion, persona - anima, the individual versus the collective, and the archetypal images and the processes of individualization. MacKinnon (1962) chose not to study potential for creativity

but the realization and expression of clearly identifiable personality traits for the creative individual. Certain personality traits are recognized as predictors of creative persons.

In a study at the Institute of Personality Assessment of Berkeley, 40 selected architects participated in a weekend retreat of testing and assessment. The results were that 50% of the architects were intuitive-feeling (NF) and 50% were intuitive-thinking (NT). MacKinnon (1962) also found that

Writers prefer feeling, mathematicians, research, scientists, and engineers prefer thinking, while architects split fifty-fifty in their preference for one or the other of the two functions. Approximately two-thirds of all our creative groups score as introverts, though there is no evidence that introverts as such are more creative than extroverts (p. 490).

MacKinnon (1962) found in further research using the MBTI with other groups that

In contrast to an estimated 25% of the general population who are intuitive, 90% of the creative writers, 92% of the mathematicians, 93% of the research scientists and 100% of the architects are intuitive as measured by this test (p. 489).

The MBTI measures personality factors related to creativity in assessing the architects in MacKinnon's (1962) research. Since 1962, many studies have been conducted to estimate the correlation between the MBTI scores and creativity and esthetic preferences (Buchanan and Taylor, 1986; Coan, 1978; Ireland and Kernan-Schloss, 1983; O'Haire and Marcia, 1980; Palmiere, 1972). Although the inventory does not measure interest, it has been effective in predicting or describing characteristics of different occupations.

Because creativity cannot be anticipated and controlled, it is notoriously difficult to research. Until the 1950s it belonged more to the realm of philosophizing than empirical enquiry (Wallas, 1926; Rogers, 1970). There is still no real agreement about what constitutes a creative product or outcome

(Shouksmith, 1970) and, in the absence of a well-elaborated theory, much creativity research has been atheoretical and pragmatic (Pickard, 1990).

Guilford (1950) has been credited with the emergence of interest in creativity research. Since the 1950s, research has increased steadily in many areas of creativity. Freeman, Butcher, and Christie (1968) classify creativity research in three main divisions, according to theoretical emphasis: (a) intelligence and abilities, the assessment of the creative individual's intelligence; (b) personality characteristics, the identification of the creative person's traits; and (c) education and training, the investigation of educational techniques conducive to the development of creative talent (Diehl, 1992).

The purpose of this study is to assess the relationship between creativity level, career aspirations, and personality types in interior design students. The objectives of this research are to assess creativity, career aspirations, and personality type in interior design students. Recommendations will be made for interior design programs at the university level based on the findings of this study.

Methodology

This study was descriptive research and was appropriate for several reasons. Studies have been conducted with the Myers-Briggs Type Indicator (MBTI), a personality assessment instrument, in identifying personality factors related to creativity. MacKinnon (1962) began some of the earliest research in creativity with the MBTI at the University of Berkeley. MacKinnon's research in assessing creativity in architects influenced others to conduct further research on the correlation of MBTI scores and creativity and esthetic preferences (Buchanan and Taylor, 1986; Coan, 1978; O'Haire and Marcia, 1980;

Palmiere, 1972). Therefore, the MBTI instrument provides the base for the descriptive study.

For the purposes of this study the population was defined as: all juniors and seniors studying interior design at accredited programs in the United States in 1992. The programs were solicited for agreement to participate through telephone contact. The only criteria was that the programs be Foundation for Interior Design Education and Research (FIDER) accredited. The sample consisted of 234 junior and senior interior design students from twelve accredited programs (Table I).

Insert Table I here

Several instruments were used in this study to assess the areas of creativity, personality type, and career aspirations. The Preference Inventory (PI) was selected to assess creativity level. The PI is comprised of 53 five-point rating scale items. This inventory measures (a) internal sensation seeking, a form of motivation to fantasize and mentally create, (b) curiosity, and (c) a need for creative production, a measure of the urge or drive to be creatively productive. Other items in the PI measure aspects of originality and were taken from the How Do You Think test (Davis, 1975; Davis and Subkoviak, 1975). Although the Myers-Briggs Type Indicator (MBTI) does not measure interest, it has been effective in predicting or describing characteristics of different occupations. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Pinkney, 1983).

The MBTI form G self-scorable version was used to assess personality type and consisted of 94 questions. The MBTI measures one's preferences on four scales: (a) Extravert "E" or Introvert "I", (b) Sensing "S" or Intuition "N", (c) Thinking "T" or Feeling "F", and (d) Judging "J" or Perceiving "P". MBTI scoring generates four basic scores for each of the four preferences stemming from any combination in the four scales.

The instrument to test career aspirations in interior design students was developed for this study. The instrument was comprised of three sections. The first section addressed the areas of the interior design curriculum such as Residential Design, Business Practices, History of Art and Design, and Theory. These areas were self-rated by the student on a one to five Likert scale with one being a major strength and five being a minor strength. The second section addressed career preferences of the student for work place settings including interior design firms, architectural firms, kitchen and bath showrooms or other. The third section of the questionnaire asked the student to rate what aspects of the profession of interior design they wished to work in according to a rating of strongly agree to strongly disagree. These aspects range from residential design, commercial design, CAD, stage design, museum and other areas.

Questionnaires were mailed to professors of each of the participating FIDER accredited programs who administered the questionnaires to the junior and senior studio classes. The professors administered the Preference Inventory (PI) first, followed by the MBTI and the Career Aspiration Questionnaire. These were completed in one sitting with no time limit other than regularly scheduled time for studio class. Due to the limited nature of the literature, recommendations are made for further research directly related to careers in interior design.

Results

An analysis of variance was conducted on the four groups of MBTI types and the inventory factors from the Preference Inventory (Bull, 1978) used to assess creativity. The table reveals the significance of certain creativity variables and particular MBTI types. Of the 234 respondents, 40.2% were in the catalyst type with 16.2% of this group falling in the ENFP type. The troubleshooter type comprised 12.8%, the traditional/judicial type made up 24.8%, and the visionary type had 22.1% (Table II).

Insert Table II here

The creative variable was a sum of items on the PI to create a single unit to compare to the other areas involved in the study: personality and career aspirations. Also, the subscales of the PI were analyzed with the MBTI results. For the variable creative, there was a significant difference between the visionary and troubleshooter categories from the post hoc analysis using Duncan's multiple range test. The mean for the visionary type was slightly higher at 197.91 as compared to 182.86 for the troubleshooter type which suggests these two types are more creative. The traditional/judicial and catalyst types were similar in respect to their means and fell between the visionary and troubleshooter categories. Concerning desire for creative production, there was a significant difference between the categories of visionary and the other three types. The mean for the visionary type was 10.68 which was slightly higher than that of the catalyst, traditional/judicial, and troubleshooter. In regards to visualization before production, the troubleshooter type mean was different, but

was the lowest of the four groups. The catalyst, traditional/judicial, and visionary means were all higher but not significantly different from one another.

Concerning curiosity about things, the visionary type mean was highest at 12.01 and differed significantly from the troubleshooter type at 11.03. Both catalyst and traditional/judicial fell between these and were not significantly different from one another. With regards to the variable multidimensional originality, the means divided the four types into two groups. The visionary and catalyst means were significantly higher from those of the traditional/judicial and troubleshooter groups. The results were similar for the variable curiosity about art, with the four types being again divided into two groups. Again, the visionary and catalyst groups were higher than that of the traditional/judicial and troubleshooter groups.

For the variable mental visualization, visionary was the highest mean at 11.56. This differed significantly from the troubleshooter group, with the catalyst and traditional/judicial falling between, respectively.

There was no significant difference for the variable desire for fantasy/day-dreaming. All four categories were similar with catalyst having the highest mean followed by the visionary, troubleshooter, and traditional/judicial.

Career

In analyzing the career aspirations variables with that of personality types, the following results were noted. For areas of interior design that students were asked to rate their strengths according to a Likert scale, only basic and creative arts, theory, technical knowledge, communication skills, and history of art and design were significantly related to MBTI.

In regards to the career interests of basic and creative arts, the mean for the troubleshooter type was 2.43 which was significantly different from the visionary type. Both catalyst and traditional/judicial fell between the other two types and were not significantly different from one another. These same findings were the result for the interest in theory.

For technical knowledge, the catalyst type had the highest mean (2.82) which differed significantly from the traditional/judicial group. For those interested in communication skills and history of art and design, only the troubleshooter mean was significantly different from the other three groups with the visionary type having the lowest mean.

Results were interpreted for the second section of career aspiration variables concerning the types of firms for interior designers to work for. Only the variable for architectural firm was significant with the visionary mean significantly different from traditional/judicial and both troubleshooter and catalyst falling between these categories. Interestingly, the variable for interior design firm was not significantly different at the $p > .05$, but still showed a significant difference between the means for catalyst and that of the troubleshooter.

The third section of the career aspirations questionnaire had 17 variables for areas within the field of interior design, in which students indicated preferences for career options. Of these, only two showed significance: stage design and designing for special groups. In regards to stage design, only the catalyst group differed significantly from the other three groups. For designing for special groups, the highest mean was for the visionary type (3.94). This differed significantly from that of the troubleshooter with the lowest mean of 3.36.

A factor analysis procedure was utilized in evaluating responses to the interior design career areas. The factor analysis resulted in six factors. All items that did not load at the 0.500 or above were eliminated. A total of 17 items were included in the final factor groupings (Table III).

Insert Table III here

The items within each factor show a similarity for characteristics of the particular factor. Factor 1 was comprised of commercial and residential design, designing for special groups such as the elderly or handicapped, and facility management. Factor 2 related to aspects of "display" such as stage, lighting and furniture design and photography. Factor 3 was showroom and furnishing sales or otherwise more service-oriented aspects of interior design. Factor 4 was a combination of academic/education-related items; code development, computer aided drafting and design (CAD) and teaching/research. Factor 5 was history-based both in historical restoration/preservation and museum design. Factor 6 was more product-oriented in color selection and textile design.

Summary

Much of the literature has dealt with creativity and its relationship to the Intuitive (N) factor of the MBTI. Often, studies have shown the visionary (NT) category to be the predominate type for creative professions. The results of this current study revealed that a visionary individual scored higher on the creativity scales than that of the other three types. However, with 40.2% of the sample for the current study being in the Catalyst category, additional exploration of research in this area is warranted.

Insert Table IV here

The Intuitive or (N) factor plays a large part in these two particular categories, figuring so prominently in the creativity area of this study. The NT or Visionary type approaches creativity with logic and the need to understand and explain. The NF or Catalyst approaches creativity from the aspect of uniqueness and their vision of perfection. Once the project is complete, the reality of the creation will never live up to their conception of the idea.

In regards to the creativity variable, only multidimensional originality and curiosity about art were significant for both the Catalyst and Visionary categories. This can be explained by the Intuitive (N) factor, for both types are striving to find possibilities of changing or improving the actual.

Research has shown that most (NT) individuals are male and most (NF) individuals are female (Myers and MacCaulley, 1985). This does not mean there are not NF male or NT females, only that the T-F dimension is the only pair of preference which shows a sex trend (Myers, 1963).

The sample selected for this study was representative of the general population, in that there were more NF (Catalyst) and females in the sample (40.2%) and only seven males. This proportion holds true for that of the general population. More females are presently involved in interior design than males.

Females who are NF or Catalyst operate on the Feeling (F) dimension of their personality. They will make decisions on value judgments of a personal basis. Males with the NT or Visionary category operate on an impersonal, logical and objective judgment basis. There is no right or wrong to either dimension. In fact, the two are necessary to present the opposite point of view. The T person tends to give priority to objective criteria and attempts to win

people over to their point of view through logic rather than appeal to the emotions. The F person tends to be good at persuasion and makes decisions based on the personal impact of the decision on the people around them.

The results of this research indicate that interior design students have personality traits that may influence their creativity processes. A better understanding of these traits and their relationship to creativity provides an opportunity for educators to help students build an awareness of their personality traits which might impact their career choices in the interior design field.

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TABLE I
SUMMARY OF SUBJECTS AND
PARTICIPATING INSTITUTIONS

School	Junior		Senior		Total
	Male	Female	Male	Female	
University of Texas Austin, Texas	2	3	5	22	32
Oklahoma State University Stillwater, Oklahoma	3	8	2	14	27
Kent State University Kent, Ohio	0	0	0	14	14
Baylor University Waco, Texas	0	2	0	10	12
Texas Christian University Fort Worth, Texas	0	6	0	4	10
Virginia Tech Blacksburg, Virginia	0	0	0	22	22
Kansas State University Manhattan, Kansas	0	0	2	33	35
Marymount University Arlington, Virginia	1	4	3	7	15
Mount Vernon College Washington, D.C.	0	10	0	11	21
Appalachian State University Boone, North Carolina	1	4	1	23	29
University of Missouri Columbia Missouri	0	0	4	13	17
TOTALS	7	37	17	173	234

TABLE II
THE PREFERENCE INVENTORY

Creativity Variable	F	Pr > F
Creative	6.55	.0003
Desire for Creative Production	3.53	.0159
Visualization Before Production	3.17	.0254
Curiosity About Things	2.14	.0963
Multidimensional Originality	7.14	.0001
Mental Visualization	1.95	.1233
Desire for Fantasy/Daydreaming	1.66	.1764
Curiosity About Art	9.33	.0001

TABLE III
INTERIOR DESIGN CAREER AREAS
FACTOR LOADINGS

Factor 1	
Commercial Design	0.6795
Facility Management	0.6761
Designing for Special Groups	0.5352
Residential Design	0.6019
Factor 2: Display	
Stage Design	0.6838
Lighting Design	0.6725
Furniture Design	0.6289
Photography	0.5248
Factor 3: Service	
Showroom Sales	0.9300
Furnishing Sales	0.9270
Factor 4: Academics	
Code Development	0.7885
CAD Design	0.6298
Teaching/Research	0.5611
Factor 5: Historical Interest	
Museum/Preservation	0.8538
Historical Restoration	0.8287
Factor 6: Product Development	
Color Selection	0.8186
Textile Design	0.7197

TABLE IV
SUMMARY OF PERSONALITY TYPES

ISTJ N = 15 6.4%	ISFJ N = 15 6.4%	INFJ N = 11 4.7%	INTJ N = 11 4.7%
ISTP N = 8 3.4%	ISFP N = 6 2.6%	INFP N = 24 10.3%	INTP N = 12 5.1%
ESTP N = 5 2.1%	ESFP N = 11 4.7%	ENFP N = 38 16.2%	ENTP N = 20 8.5%
ESTJ N = 10 4.3%	ESFJ N = 18 7.7%	ENFJ N = 21 9.0%	ENTJ N = 9 3.8%

Traditional/ Judicial	Troubleshooter	Catalyst	Visionary
(SF) 16.2%	(SP) 21.4%	(NF) 40.2%	(NT) 22.1%

CHAPTER V

SUMMARY AND CONCLUSIONS

Keirsey and Bates (1974) studied the 16 personality types and grouped them into four classifications according to two of the four preferences in common for the grouped types: Troubleshooter (SP), Traditional/Judicial (SJ), Catalyst (NF), and Visionary (NT). Research has shown that the NF or NT will predict an interest in an artistic profession (MacKinnon, 1962). In MacKinnon's (1962) study of architects, he found 50% to be NF and 50% to be NT. The N or intuitive factor is associated with creativity from this and numerous other studies. The results of the current study support the hypothesis that intuitive individuals are more likely to be interior designers because of the artistic background in the field. This is interesting due to the fact that more respondents fell into the catalyst (NF) category over that of the visionary (NT).

Predominantly, the literature have focused on creativity and its relationship to the intuitive (N) dimension of the MBTI. The intuitive dimension plays a large part in the two groups of visionary and catalyst figuring so prominently in the creativity area of this particular study. Both types focus their attention on possibilities. The visionary (NT) approaches creativity with logic and the need to understand and explain what goes on in the world around them. The catalyst (NF) approaches creativity from the aspect of finding the unique quality in everything coupled with their own vision of perfection. Generally for the NF individual, the reality of the creation will never live up to their conception of the idea.

In regards to the creativity variable of this study, only multidimensional originality and curiosity about art were significant for both the catalyst and visionary groups. This can be attributed to the intuitive (N) dimension, considering the commonality of both groups focusing on the possibilities.

Research has shown that the T-F dimension of the MBTI is the only pair of preferences which show a sex trend. Most NT individuals are male and most NF are females. This does not mean however that there are not NT females and NF males. The sample selected for this study was representative of the general population at large involved in interior design. There were more NF catalyst females in the sample (40.2%) compared to the 7 total males in the group. This proportion matches generally that of the interior design community, there being more females than males involved in the profession.

Catalyst (NF) females operate on the F dimension of their personality type. They will make decisions on value judgments of a personal basis. Visionary (NT) males operate on an impersonal, logical and objective judgment basis. There is no right or wrong to either dimension. The two are necessary for each other to present the opposite point of view. The T person tends to give priority to objective criteria and will attempt to win people over to their point of view through the use of logic rather than appeal to the emotions. The F person tends to be good at persuasion and makes decisions based on the personal impact of the decision on those people around them.

In summary, though the catalyst (NF) group had the highest number of respondents, the group itself did not differ significantly from the other three groups. Results showed the troubleshooter (SP) or visionary (NT) categories to be significantly different in aspects of creativity and career interests. The visionary (NT) group is influenced by the intuitive N factor. While this is true also of the catalyst (NF) group, the results in this study did not reveal significant

differences. An assumption for the troubleshooter (SP) category figuring so prominently within the top levels of the variables results is that of the perceiving (P) attribute. This allows an individual to keep their options open, be flexible, and review their possibilities. The troubleshooter (SP) would be an individual who was open to ideas and suggestions, especially in a relationship between a designer and their client.

Further analysis should be conducted to determine the depth of the relationship between creativity, career aspirations, and personality types in interior design students. This could be beneficial to interior design programs across the country. Students, with the assistance of faculty, could focus their efforts towards an area of interior design which would present them with a rewarding and satisfying career.

There are some approaches available to accomplish this task. One way would be to use the information from this study in student internship programs. Students and the intern "host sites" could be tested for personality type to determine the ultimate experience of student with their intern hosts. In this way, both the students and professionals in the field would benefit from knowing prior to the internship period more about themselves and others. There have been numerous studies on the effects of learning style/teaching style in regards to the MBTI.

The teaching style of the catalyst (NF) is marked by personal charisma and commitment to the students they teach. The catalyst teacher is concerned not only for their intellectual development but their social development as well. They relate well on an individual basis and help students discover talents which were previously unrecognized. The NF tends to be popular and a strong leader.

Catalysts can be unconventional in their teaching and are able to handle the unconventional in their students. They are apt to use "value" oriented curricula and experience to teach their students. The NF teacher is very adaptable at changing the lessons if their students need other experiences at a given time.

Occasionally, the NF experiences difficulty in being as accepting of superiors in general as they are of students and fellow teachers. This behavior is understandable in view of the catalyst's need for integrity and unique identity.

In general, the NF tends to be enthusiastic about their career and to enjoy teaching. They are willing to devote all the time necessary to do what needs to be done. They tend to keep up on professional literature in a somewhat cursory manner, although they are always interested in anything which is innovative and new.

The visionary or NT teacher, on the other hand, is primarily interested in the development of intelligence through answers to nature's enigmas. It is this approach which the NT will inspire in their students. They focus on relationships and complex components in their search for knowledge.

The NT teacher tends to be impersonal in their approach to their students. The visionary teacher assumes the student wishes to learn and is often oblivious to the emotional climate of the class. They wish to seek new tactics for teaching the same material repeatedly and are often best at designing and building the curricula, but not at the implementation of the ideas involved. The visionary teacher is better at teaching technical subjects rather than clerical, historical or artistic areas. They relate better to rapid learners and generally move too fast with their teaching style to benefit all but a few. The NT has very high standards for their students and will measure succeeding groups of students against one outstanding class.

Students of a NT teacher will have difficulty in believing they are performing adequately due to the fact that an NT teacher has trouble communicating to their students that their efforts are appreciated. The visionary teacher needs to make a conscious effort to verbalize their appreciation for the contributions of the students in their efforts to learn. Visionary teachers are apt to continue to improve their professional skills in their chosen field and will be more likely to hold an advanced degree. They are likely to be well read in professional literature and invest heavily in professional books.

Further research into the relationship between teaching styles as evidenced by the MBTI and creativity could enhance the curriculum in creative fields like interior design.

Another approach would be to do research on practicing professionals in the field of interior design according to career satisfaction. Previous research has outlined MBTI characteristics for architects and designers (Appendix C, p. 73). However, further research with professionals could test for personality type, creativity, and then determine level of satisfaction in the particular career area of interior design they have chosen. By sampling a large enough population, results could be combined and interpreted with the goal of finding further evidence of a relationship between creativity, personality type, and career aspirations in interior design. A study such as this could provide further information which, when coupled with the current study of students, could help to better understand how to assist students in interior design.

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APPENDIXES

APPENDIX A

INSTRUMENTS

MYERS-BRIGGS TYPE INDICATOR

FORM IN QUESTION BOOKLET

by Katharine C. Briggs and Isabel Briggs Myers

DIRECTIONS:

There are no "right" or "wrong" answers to these questions. Your answers will help show how you like to look at things and how you like to go about deciding things. Knowing your own preferences and learning about other people's can help you understand where your special strengths are, what kinds of work you might enjoy and be successful doing, and how people with different preferences can relate to each other and be valuable to society.

Read each question carefully and mark your answer on the separate answer sheet. *Make no marks on the question booklet.* Do not think too long about any question. If you cannot decide on a question, skip it but be careful that the *next* space you mark on the answer sheet has the same number as the question you are then answering.

Read the directions on your answer sheet, fill in your name and any other facts asked for, and work through until you have answered all the questions.



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Which answer comes closest to telling how you usually feel or act?

1. Does following a schedule
 - (A) appeal to you, or
 - (B) cramp you?
2. Do you usually get along better with
 - (A) imaginative people, or
 - (B) realistic people?
3. If strangers are staring at you in a crowd, do you
 - (A) often become aware of it, or
 - (B) seldom notice it?
4. Are you more careful about
 - (A) people's feelings, or
 - (B) their rights?
5. Are you
 - (A) inclined to enjoy deciding things, or
 - (B) just as glad to have circumstances decide a matter for you?
6. When you are with a group of people, would you usually rather
 - (A) join in the talk of the group, or
 - (B) talk individually with people you know well?
7. When you have more knowledge or skill in something than the people around you, is it more satisfying
 - (A) to guard your superior knowledge, or
 - (B) to share it with those who want to learn?
8. When you have done all you can to remedy a troublesome situation, are you
 - (A) able to stop worrying about it, or
 - (B) still more or less haunted by it?
9. If you were asked on a Saturday morning what you were going to do that day, would you
 - (A) be able to tell pretty well, or
 - (B) list twice too many things, or
 - (C) have to wait and see?
10. Do you think on the whole that
 - (A) children have the best of it, or
 - (B) life is more interesting for grown-ups?
11. In doing something that many other people do, does it appeal to you more to
 - (A) do it in the accepted way, or
 - (B) invent a way of your own?
12. When you were small, did you
 - (A) feel sure of your parents' love and devotion to you, or
 - (B) feel that they admired and approved of some other child more than they did of you?
13. Do you
 - (A) rather prefer to do things at the last minute, or
 - (B) find that hard on the nerves?
14. If a breakdown or mix-up halted a job on which you and a lot of others were working, would your impulse be to
 - (A) enjoy the breathing spell, or
 - (B) look for some part of the work where you could still make progress, or
 - (C) join the "trouble-shooters" who were wrestling with the difficulty?
15. Do you usually
 - (A) show your feelings freely, or
 - (B) keep your feelings to yourself?
16. When you have decided upon a course of action, do you
 - (A) reconsider it if unforeseen disadvantages are pointed out to you, or
 - (B) usually put it through to a finish, however it may inconvenience yourself and others?
17. In reading for pleasure, do you
 - (A) enjoy odd or original ways of saying things, or
 - (B) like writers to say exactly what they mean?

18. In any of the ordinary emergencies of everyday life, do you prefer to
 - (A) take orders and be helpful, or
 - (B) give orders and be responsible?
19. At parties, do you
 - (A) sometimes get bored, or
 - (B) always have fun?
20. Is it harder for you to adapt to
 - (A) routine, or
 - (B) constant change?
21. Would you be more willing to take on a heavy load of extra work for the sake of
 - (A) extra comforts and luxuries, or
 - (B) a chance to achieve something important?
22. Are the things you plan or undertake
 - (A) almost always things you can finish, or
 - (B) often things that prove too difficult to carry through?
23. Are you more attracted to
 - (A) a person with a quick and brilliant mind, or
 - (B) a practical person with a lot of common sense?
24. Do you find people in general
 - (A) slow to appreciate and accept ideas not their own, or
 - (B) reasonably open-minded?
25. When you have to meet strangers, do you find it
 - (A) pleasant, or at least easy, or
 - (B) something that takes a good deal of effort?
26. Are you inclined to
 - (A) value sentiment more than logic, or
 - (B) value logic more than sentiment?
27. Do you prefer to
 - (A) arrange dates, parties, etc. well in advance, or
 - (B) be free to do whatever looks like fun when the time comes?
28. In making plans which concern other people, do you prefer to
 - (A) take them into your confidence, or
 - (B) keep them in the dark until the last possible moment?
29. Is it a higher compliment to be called
 - (A) a person of real feeling, or
 - (B) a consistently reasonable person?
30. When you have a decision to make, do you usually
 - (A) make it right away, or
 - (B) wait as long as you reasonably can before deciding?
31. When you run into an unexpected difficulty in something you are doing, do you feel it to be
 - (A) a piece of bad luck, or
 - (B) a nuisance, or
 - (C) all in the day's work?
32. Do you almost always
 - (A) enjoy the present moment and make the most of it, or
 - (B) feel that something just ahead is more important?
33. Are you
 - (A) easy to get to know, or
 - (B) hard to get to know?
34. With most of the people you know, do you
 - (A) feel that they mean what they say, or
 - (B) feel you must watch for a hidden meaning?
35. When you start a big project that is due in a week, do you
 - (A) take time to list the separate things to be done and the order of doing them, or
 - (B) plunge in?
36. In solving a personal problem, do you
 - (A) feel more confident about it if you have asked other people's advice, or
 - (B) feel that nobody else is in as good a position to judge as you are?
37. Do you admire more the people who are
 - (A) conventional enough never to make themselves conspicuous, or
 - (B) too original and individual to care whether they are conspicuous or not?
38. Which mistake would be more natural for you:
 - (A) to drift from one thing to another all your life, or
 - (B) to stay in a rut that didn't suit you?

Go on to the next page.

39. When you run across people who are mistaken in their beliefs, do you feel that
 - (A) it is your duty to set them right, or
 - (B) it is their privilege to be wrong?
40. When an attractive chance for leadership comes to you, do you
 - (A) accept it if it is something you can really swing, or
 - (B) sometimes let it slip because you are too modest about your own abilities, or
 - (C) or doesn't leadership ever attract you?
41. Among your friends, are you
 - (A) one of the last to hear what is going on, or
 - (B) full of news about everybody?
42. Are you at your best
 - (A) when dealing with the unexpected, or
 - (B) when following a carefully worked-out plan?
43. Does the importance of doing well on a test make it generally
 - (A) easier for you to concentrate and do your best, or
 - (B) harder for you to concentrate and do yourself justice?
44. In your free hours, do you
 - (A) very much enjoy stopping somewhere for refreshments, or
 - (B) usually want to use the time and money another way?
45. At the time in your life when things piled up on you the worst, did you find
 - (A) that you had gotten into an impossible situation, or
 - (B) that by doing only the necessary things you could work your way out?
46. Do most of the people you know
 - (A) take their fair share of praise and blame, or
 - (B) grab all the credit they can but shift any blame on to someone else?
47. When you are in an embarrassing spot, do you usually
 - (A) change the subject, or
 - (B) turn it into a joke, or
 - (C) days later, think of what you should have said?
48. Are such emotional "ups and downs" as you may feel
 - (A) very marked, or
 - (B) rather moderate?
49. Do you think that having a daily routine is
 - (A) a comfortable way to get things done, or
 - (B) painful even when necessary?
50. Are you usually
 - (A) a "good mixer", or
 - (B) rather quiet and reserved?
51. In your early childhood (at six or eight), did you
 - (A) feel your parents were very wise people who should be obeyed, or
 - (B) find their authority irksome and escape it when possible?
52. When you have a suggestion that ought to be made at a meeting, do you
 - (A) stand up and make it as a matter of course, or
 - (B) hesitate to do so?
53. Do you get more annoyed at
 - (A) fancy theories, or
 - (B) people who don't like theories?
54. When you are helping in a group undertaking, are you more often struck by
 - (A) the cooperation, or
 - (B) the inefficiency, or
 - (C) or don't you get involved in group undertakings?
55. When you go somewhere for the day, would you rather
 - (A) plan what you will do and when, or
 - (B) just go?
56. Are the things you worry about
 - (A) often really not worth it, or
 - (B) always more or less serious?
57. In deciding something important, do you
 - (A) find you can trust your feeling about what is best to do, or
 - (B) think you should do the *logical* thing, no matter how you feel about it?

58. Do you tend to have
 (A) deep friendships with a very few people, or
 (B) broad friendships with many different people?
59. Do you think your friends
 (A) feel you are open to suggestions, or
 (B) know better than to try to talk you out of anything you've decided to do?
60. Does the idea of making a list of what you should get done over a week-end
 (A) appeal to you, or
 (B) leave you cold, or
 (C) positively depress you?
61. In traveling, would you rather go
 (A) with a companion who had made the trip before and "knew the ropes", or
 (B) alone or with someone greener at it than yourself?
62. Would you rather have
 (A) an opportunity that may lead to bigger things, or
 (B) an experience that you are sure to enjoy?
63. Among your personal beliefs, are there
 (A) some things that cannot be proved, or
 (B) only things that *can* be proved?
64. Would you rather
 (A) support the established methods of doing good, or
 (B) analyze what is still wrong and attack unsolved problems?
65. Has it been your experience that you
 (A) often fall in love with a notion or project that turns out to be a disappointment—so that you "go up like a rocket and come down like the stick", or do you
 (B) use enough judgment on your enthusiasms so that they do not let you down?
66. Do you think you get
 (A) more enthusiastic about things than the average person, or
 (B) less enthusiastic about things than the average person?
67. If you divided all the people you know into those you like, those you dislike, and those toward whom you feel indifferent, would there be more of
 (A) those you like, or
 (B) those you dislike?
- [On this next question *only*, if two answers are true, mark both.]
68. In your daily work, do you
 (A) rather enjoy an emergency that makes you work against time, or
 (B) hate to work under pressure, or
 (C) usually plan your work so you won't need to work under pressure?
69. Are you more likely to speak up in
 (A) praise, or
 (B) blame?
70. Is it higher praise to say someone has
 (A) vision, or
 (B) common sense?
71. When playing cards, do you enjoy most
 (A) the sociability,
 (B) the excitement of winning,
 (C) the problem of getting the most out of each hand,
 (D) the risk of playing for stakes,
 (E) or don't you enjoy playing cards?

Go on to the next page.

Which word in each pair appeals to you more?

Think what the words mean, not how they look or how they sound.

- | | | | | | |
|---------------------|----------------|-----|---------------------|-------------|-----|
| 72. (A) firm-minded | warm-hearted | (B) | 98. (A) sensible | fascinating | (B) |
| 73. (A) imaginative | matter-of-fact | (B) | 99. (A) changing | permanent | (B) |
| 74. (A) systematic | spontaneous | (B) | 100. (A) determined | devoted | (B) |
| 75. (A) congenial | effective | (B) | 101. (A) system | zest | (B) |
| 76. (A) theory | certainty | (B) | 102. (A) facts | ideas | (B) |
| 77. (A) party | theater | (B) | 103. (A) compassion | foresight | (B) |
| 78. (A) build | invent | (B) | 104. (A) concrete | abstract | (B) |
| 79. (A) analyze | sympathize | (B) | 105. (A) justice | mercy | (B) |
| 80. (A) popular | intimate | (B) | 106. (A) calm | lively | (B) |
| 81. (A) benefits | blessings | (B) | 107. (A) make | create | (B) |
| 82. (A) casual | correct | (B) | 108. (A) wary | trustful | (B) |
| 83. (A) active | intellectual | (B) | 109. (A) orderly | easy-going | (B) |
| 84. (A) uncritical | critical | (B) | 110. (A) approve | question | (B) |
| 85. (A) scheduled | unplanned | (B) | 111. (A) gentle | firm | (B) |
| 86. (A) convincing | touching | (B) | 112. (A) foundation | spire | (B) |
| 87. (A) reserved | talkative | (B) | 113. (A) quick | careful | (B) |
| 88. (A) statement | concept | (B) | 114. (A) thinking | feeling | (B) |
| 89. (A) soft | hard | (B) | 115. (A) theory | experience | (B) |
| 90. (A) production | design | (B) | 116. (A) sociable | detached | (B) |
| 91. (A) forgive | tolerate | (B) | 117. (A) sign | symbol | (B) |
| 92. (A) hearty | quiet | (B) | 118. (A) systematic | casual | (B) |
| 93. (A) who | what | (B) | 119. (A) literal | figurative | (B) |
| 94. (A) impulse | decision | (B) | 120. (A) peacemaker | judge | (B) |
| 95. (A) speak | write | (B) | 121. (A) accept | change | (B) |
| 96. (A) affection | tenderness | (B) | 122. (A) agree | discuss | (B) |
| 97. (A) punctual | leisurely | (B) | 123. (A) executive | scholar | (B) |

Which answer comes closest to telling how you usually feel or act?

124. Do you find the more routine parts of your day
 - (A) restful, or
 - (B) boring?
125. If you think you are not getting a square deal in a club or team to which you belong, is it better to
 - (A) shut up and take it, or
 - (B) use the threat of resigning if necessary to get your rights?
126. Can you
 - (A) talk easily to almost anyone for as long as you have to, or
 - (B) find a lot to say only to certain people or under certain conditions?
127. When strangers notice you, does it
 - (A) make you uncomfortable, or
 - (B) not bother you at all?
128. If you were a teacher, would you rather teach
 - (A) fact courses, or
 - (B) courses involving theory?
129. When something starts to be the fashion, are you usually
 - (A) one of the first to try it, or
 - (B) not much interested?
130. In solving a difficult personal problem, do you
 - (A) tend to do more worrying than is useful in reaching a decision, or
 - (B) feel no more anxiety than the situation requires?
131. If people seem to slight you, do you
 - (A) tell yourself they didn't mean anything by it, or
 - (B) distrust their good will and stay on guard with them thereafter?
132. When you have a special job to do, do you like to
 - (A) organize it carefully before you start, or
 - (B) find out what is necessary as you go along?
133. Do you feel it is a worse fault
 - (A) to show too much warmth, or
 - (B) not to have warmth enough?
134. When you are at a party, do you like to
 - (A) help get things going, or
 - (B) let the others have fun in their own way?
135. When a new opportunity comes up, do you
 - (A) decide about it fairly quickly, or
 - (B) sometimes miss out through taking too long to make up your mind?
136. In managing your life, do you tend to
 - (A) undertake too much and get into a tight spot, or
 - (B) hold yourself down to what you can comfortably handle?
137. When you find yourself definitely in the wrong, would you rather
 - (A) admit you are wrong, or
 - (B) not admit it, though everyone knows it,
 - (C) or don't you ever find yourself in the wrong?
138. Can the new people you meet tell what you are interested in
 - (A) right away, or
 - (B) only after they really get to know you?
139. In your home life, when you come to the end of some undertaking, are you
 - (A) clear as to what comes next and ready to tackle it, or
 - (B) glad to relax until the next inspiration hits you?
140. Do you think it more important to
 - (A) be able to see the possibilities in a situation, or
 - (B) be able to adjust to the facts as they are?
141. Do you feel that the people whom you know personally owe their successes more to
 - (A) ability and hard work, or
 - (B) luck, or
 - (C) bluff, pull and shoving themselves ahead of others?
142. In getting a job done, do you depend upon
 - (A) starting early, so as to finish with time to spare, or
 - (B) the extra speed you develop at the last minute?
143. After associating with superstitious people, have you
 - (A) found yourself slightly affected by their superstitions, or
 - (B) remained entirely unaffected?

Go on to the next page.

144. When you don't agree with what has just been said, do you usually
(A) let it go, or
(B) put up an argument?
145. Would you rather be considered
(A) a practical person, or
(B) an ingenious person?
146. Out of all the good resolutions you may have made, are there
(A) some you have kept to this day, or
(B) none that have really lasted?
147. Would you rather work under someone who is
(A) always kind, or
(B) always fair?
148. In a large group, do you more often
(A) introduce others, or
(B) get introduced?
149. Would you rather have as a friend someone who
(A) is always coming up with new ideas, or
(B) has both feet on the ground?
150. When you have to do business with strangers, do you feel
(A) confident and at ease, or
(B) a little fussed or afraid that they won't want to bother with you?
151. When it is settled well in advance that you will do a certain thing at a certain time, do you find it
(A) nice to be able to plan accordingly, or
(B) a little unpleasant to be tied down?
152. Do you feel that sarcasm
(A) should never be used where it can hurt people's feelings, or
(B) is too effective a form of speech to be discarded for such a reason?
153. When you think of some little thing you should do or buy, do you
(A) often forget it till much later, or
(B) usually get it down on paper to remind yourself, or
(C) always carry through on it without reminders?
154. Do you more often let
(A) your heart rule your head, or
(B) your head rule your heart?
155. In listening to a new idea, are you more anxious to
(A) find out all about it, or
(B) judge whether it is right or wrong?
156. Are you oppressed by
(A) many different worries, or
(B) comparatively few?
157. When you don't approve of the way a friend is acting, do you
(A) wait and see what happens, or
(B) do or say something about it?
158. Do you feel it is a worse fault to be
(A) unsympathetic, or
(B) unreasonable?
159. When a new situation comes up which conflicts with your plans, do you try first to
(A) change your plans to fit the situation, or
(B) change the situation to fit your plans?
160. Do you think the people close to you know how you feel
(A) about most things, or
(B) only when you have had some special reason to tell them?
161. When you have a serious choice to make, do you
(A) almost always come to a clear-cut decision, or
(B) sometimes find it so hard to decide that you do not wholeheartedly follow up either choice?
162. On most matters, do you
(A) have a pretty definite opinion, or
(B) like to keep an open mind?
163. As you get to know people better, do you more often find that they
(A) let you down or disappoint you in some way, or
(B) improve upon acquaintance?
164. When the truth would not be polite, are you more likely to tell
(A) a polite lie, or
(B) the impolite truth?
165. In your way of living, do you prefer to be
(A) original, or
(B) conventional?
166. Would you have liked to argue the meaning of
(A) a lot of these questions, or
(B) only a few?

WORK ACROSS

1	A	2	A	3	A	4	A
5	A	6	A	7	A	8	A
9	A	10	A	11	A	12	A
13	A	14	A	15	A	16	A
17	A	18	A	19	A	20	A
21	A	22	A	23	A	24	A
25	A	26	A	27	A	28	A
29	A	30	A	31	A	32	A
33	A	34	A	35	A	36	A
37	A	38	A	39	A	40	A
41	A	42	A	43	A	44	A
45	A	46	A	47	A	48	A
49	A	50	A	51	A	52	A
53	A	54	A	55	A	56	A
57	A	58	A	59	A	60	A
61	A	62	A	63	A	64	A
65	A	66	A	67	A	68	A
69	A	70	A	71	A	72	A
73	A	74	A	75	A	76	A
77	A	78	A	79	A	80	A
81	A	82	A	83	A	84	A
85	A	86	A	87	A	88	A
89	A	90	A	91	A	92	A
93	A	94	A				



Myers-Briggs Type Indicator®

Form G — Self-Scorable Answer Booklet

Directions

Mark your answers by making an "X" in the appropriate box. If you make a mistake, simply blacken in the box where the error is—do not erase. The numbers go ACROSS the page, just like the questions in the question booklet.

~~When you have answered every question, open this booklet and follow the directions for scoring.~~

ID # _____

Name: _____

Date: _____ Sex: M ☐ F ☐ Age: _____

Occupation: _____

Years of schooling: _____

Group: _____



Consulting Psychologists Press, Inc.
3803 E. Bayshore Road, Palo Alto, CA 94303

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Fifth printing, 1991.

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Oklahoma State University

OFFICE OF THE ASSOCIATE DEAN FOR RESEARCH
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0117
HOME ECONOMICS 108
405-744-5054

Dear Interior Design Major,

Your assistance with a research study related to management style and creativity would be greatly appreciated. I realize your time is valuable, but a few minutes of your time would be helpful. Data from this study will be used to assess students in Interior Design for recommendations for education; therefore, your input is extremely important.

Please answer the questions as honestly as possible. There are no right or wrong responses. Your responses will remain confidential.

Thank you in advance for your time and valuable assistance.

Sincerely,

Jeanne Diehl-Shaffer

Jeanne Diehl-Shaffer, ASID, IDEC
Assistant Professor, Interior Design

Margaret J. Weber

Dr. Margaret J. Weber
Professor



Celebrating the Past Preparing for the Future

ID Number _____
 School _____

A. Background

DIRECTIONS: For the following questions please check the appropriate blank provided to the left of each answer, or fill in the requested information. You may check more than one answer if necessary.

1. Age _____
2. Gender _____ Male _____ Female
3. Ethnicity (Check one)

(a) _____ Afro-American	(d) _____ Caucasian
(b) _____ Native American	(e) _____ Hispanic
(c) _____ Oriental	(f) _____ Other (Specify) _____
4. Present marital status (check one)

_____ Married _____ Single _____ Divorced _____ Widowed
5. Where did you live during the majority of your childhood?

(a) _____	Primarily in an urban area (population greater than 50,000)
(b) _____	Primarily in a suburban area (community outside of, but adjoining, a city of 50,000 or more)
(c) _____	Primarily in a rural area (population less than 50,000)
(d) _____	A mix of the above with less than 50% of the time in any one area.
6. What is your educational status? _____ Junior _____ Senior
7. Do you have a minor? _____ yes _____ no
 If yes, what is your minor? _____
8. Is this your first degree? _____ yes _____ no
 If no, what was your past degree? _____
9. Please indicate if you have had any work experience in the following areas:

_____ Art	_____ Design
_____ Architecture	_____ Industrial Art
_____ Technical drawing	_____ Construction
_____ Other, please specify _____	
10. In what area are you interested in practicing Interior Design?

_____ Residential Design	_____ Commercial Design
_____ Institutional Design	_____ Hospitality Design
_____ Lighting Design	_____ Other, Please specify _____

B. Omnibus Preference Inventory

Directions: These questions ask about your self-perceptions and attitudes. All questions are in a rating scale form which allows you to indicate the degree to which you agree with or accept the statement. Indicate how strongly you agree or disagree with the statements below. Mark your responses according to the following scale: Strongly Agree = SA, Agree = A, Undecided = U, Disagree = D, Strongly disagree = SD. Circle your answers below.

- | | | |
|-----|--|-------------|
| 1. | I have often thought of new ideas for products, stories, paintings, etc., and I have actually produced many of them. | SA A U D SD |
| 2. | I cannot be bothered with taking things apart to find out what is inside them. | SA A U D SD |
| 3. | I have a great many interests. | SA A U D SD |
| 4. | When I am shown an object I can usually visualize where it might be used and the things which would be around it. | SA A U D SD |
| 5. | Paintings or pieces of sculpture can be appreciated but little value is gained by studying them. | SA A U D SD |
| 6. | When I was young, I was always building or making things. | SA A U D SD |
| 7. | I like to work on things which require me to create mental images. | SA A U D SD |
| 8. | I often enjoy daydreaming about future projects, activities, or problems. | SA A U D SD |
| 9. | I am very artistic. | SA A U D SD |
| 10. | I like to look at old things and try to figure out what they were used for. | SA A U D SD |
| 11. | When I visualize an art project I can't wait to complete it. | SA A U D SD |
| 12. | I am often inventive or ingenious. | SA A U D SD |
| 13. | I often enjoy daydreaming about future projects, activities, or problems. | SA A U D SD |
| 14. | I like to visualize new things before I try to make them. | SA A U D SD |
| 15. | I have always been active in drawing or painting. | SA A U D SD |
| 16. | When I study a painting or sculpture I am interested in determining what cues the artist used to communicate his/her mood. | SA A U D SD |
| 17. | I engage in some form of daydreaming every day. | SA A U D SD |
| 18. | I am not interested in the way mechanical things work. | SA A U D SD |
| 19. | I enjoy thinking of new and better ways of doing things. | SA A U D SD |
| 20. | Sometimes I like to let myself go in fantasy before I go to sleep. | SA A U D SD |
| 21. | I am quite original and imaginative. | SA A U D SD |
| 22. | I get some of my best ideas by daydreaming rather than relying on books, well-established authorities, or other people. | SA A U D SD |

23.	When I have an idea for an invention I can't wait to make it to see if it will work.	SA A U D SD
24.	I have had many hobbies.	SA A U D SD
25.	When I get a new idea for making something I try to figure out how to make it work.	SA A U D SD
26.	When I am asked to create something that is new and different I first like to create a mental blueprint or plan for it.	SA A U D SD
27.	I would rate myself high in "intuition" or "insightfulness".	SA A U D SD
28.	The imaginary stories I create in my mind seem to be replays of ones I have thought up before.	SA A U D SD
29.	I like to create ideas and think about them.	SA A U D SD
30.	I like to make things.	SA A U D SD
31.	I like trying new ideas and new approaches to problems.	SA A U D SD
32.	I do not like to go to art museums.	SA A U D SD
33.	I find it exciting to think about how I will make something and how it will look.	SA A U D SD
34.	When I see something new I try to figure out how it was made and why it was made that way.	SA A U D SD
35.	I often become totally engrossed in a new idea.	SA A U D SD
36.	When I create a fantasy it is usually new to me.	SA A U D SD
37.	I like to read art history books.	SA A U D SD
38.	My daydreams are always interesting because they are new and different.	SA A U D SD
39.	I have engaged in a lot of creative activities.	SA A U D SD
40.	I can think of many ideas for new things but that is as far as it usually goes.	SA A U D SD
41.	I do not enjoy daydreaming.	SA A U D SD
42.	I like to think of ways to embellish tales which have been told to me.	SA A U D SD
43.	I want to understand how to build or make things.	SA A U D SD
44.	When I am going to make something new and different I can see it clearly in my mind before I begin.	SA A U D SD
45.	I am interested in learning about art of various types, i.e., painting, sculpture, etc.	SA A U D SD
46.	I have taken things apart just to find out how they work.	SA A U D SD

- | | | | | | | |
|-----|---|----|---|---|---|----|
| 47. | Sometimes I dream of things which I later make or do. | SA | A | U | D | SD |
| 48. | I am not interested in making or building things. | SA | A | U | D | SD |
| 49. | I like to create fantasize in my mind. | SA | A | U | D | SD |
| 50. | I like to discuss art (painting, sculpture, etc) with other knowledgeable people. | SA | A | U | D | SD |
| 51. | I try to find out how different things work and why they work. | SA | A | U | D | SD |
| 52. | Sometimes I dream of things which lead me to new insights and discoveries. | SA | A | U | D | SD |
| 53. | I have experienced moments of inspiration and creativity when artistic expression, ideas, or the solution to problems that I have struggled with came to me with a special intensity and clarity. | SA | A | U | D | SD |

I.D.No. _____

Career Aspirations Questionnaire

Rate your strength on a 1 to 5 scale, 1 being major and 5 being minor, according to the statements below. Circle your answers.

Major Strength					Minor Strength
1	2	3	4	5	

1. I feel I have ____ strength in the following areas:

Areas of Interior Design:

Basic and Creative Arts	1	2	3	4	5
Theory	1	2	3	4	5
Ergonomics	1	2	3	4	5
Residential Design	1	2	3	4	5
Non-Residential Design	1	2	3	4	5
Technical Knowledge	1	2	3	4	5
Communication Skills	1	2	3	4	5
Business Practices	1	2	3	4	5
History of Art and Design	1	2	3	4	5
Research	1	2	3	4	5

According to your career aspirations, circle the best answer below.

SA	A	U	D	SD
Strongly				Strongly
Agree	Agree	Undecided	Disagree	Disagree

2. I want to practice with:

(a) an interior design firm	SA	A	U	D	SD
(b) an architectural firm	SA	A	U	D	SD
(c) an in-house design staff	SA	A	U	D	SD
(d) a kitchen/bath showroom	SA	A	U	D	SD
(e) a manufacturer	SA	A	U	D	SD
(f) a consulting firm	SA	A	U	D	SD
(g) other _____	SA	A	U	D	SD

3. I would like to open my own design business.

SA	A	U	D	SD
----	---	---	---	----

4. I want to work in:

(a) residential design	SA	A	U	D	SD
(b) commercial design	SA	A	U	D	SD
(c) facilities management	SA	A	U	D	SD
(d) CAD design	SA	A	U	D	SD
(e) lighting	SA	A	U	D	SD
(f) stage design	SA	A	U	D	SD
(g) photography	SA	A	U	D	SD
(h) color selection	SA	A	U	D	SD
(j) historical restoration	SA	A	U	D	SD
(k) code development	SA	A	U	D	SD
(l) teaching/research	SA	A	U	D	SD
(m) textile design	SA	A	U	D	SD
(n) furniture design	SA	A	U	D	SD
(o) design for special groups	SA	A	U	D	SD
(p) museum/preservation	SA	A	U	D	SD
(q) showroom/sales	SA	A	U	D	SD
(r) furnishings sales	SA	A	U	D	SD

APPENDIX B

IRB

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Proposal Title: The Relationship Between Creativity, Personality and Career
Aspirations in Interior Design Students

Principal Investigator: Margaret J. Weber / Randall Russ

Date: 4-23-92 IRB # HE-92-052

This application has been reviewed by the IRB and

Processed as: Exempt ☒ Expedite ☐ Full Board Review ☐
Renewal or Continuation ☐

Approval Status Recommended by Reviewer(s):

Approved ☒ Deferred for Revision ☐
Approved with Provision ☐ Disapproved ☐

Approval status subject to review by full Institutional Review Board at
next meeting, 2nd and 4th Thursday of each month.

Comments, Modifications/Conditions for Approval or Reason for Deferral or
Disapproval:

Signature: _____

Marin L. Tilley
Chair of Institutional Review Board

Date: 4-29-92

APPENDIX C

STUDIES

Architects

N = 124

SENSING		INTUITION		N	%
THINKING	FEELING	FEELING	THINKING		
ISTJ N= 9 %= 7.26 ■■■■■■■	ISFJ N= 4 %= 3.23 ■■■	INFJ N= 12 %= 9.68 ■■■■■■■■■	INTJ N= 25 %= 20.16 ■■■■■■■■■	JUDGMENT INTROVERSION	E 37 29.84
					I 87 70.16
					S 22 17.74
					N 102 82.26
				PERCEPTION EXTRAVERSION	T 70 56.45
					F 54 43.55
					J 73 58.87
					P 51 41.13
ISTP N= 0 %= 0.00	ISFP N= 1 %= .81 ■	INFP N= 21 %= 16.94 ■■■■■■■■■	INTP N= 15 %= 12.10 ■■■■■■■■■	IJ 50 40.32	
				IP 37 29.84	
				EP 14 11.29	
				EJ 23 18.55	
ESTP N= 0 %= 0.00	ESFP N= 0 %= 0.00	ENFP N= 8 %= 6.45 ■■■■■	ENTP N= 6 %= 4.84 ■■■■■	ST 16 12.90	
				SF 6 4.84	
				NF 48 38.71	
				NT 54 43.55	
ESTJ N= 7 %= 5.65 ■■■■■■■	ESFJ N= 1 %= .81 ■	ENFJ N= 7 %= 5.65 ■■■■■	ENTJ N= 8 %= 6.45 ■■■■■	SJ 21 16.94	
				SP 1 .81	
				NP 50 40.32	
				NJ 52 41.94	
				JUDGMENT EXTRAVERSION	TJ 49 39.52
					TP 21 16.94
					FP 30 24.19
					FJ 24 19.35
				JUDGMENT EXTRAVERSION	IN 73 58.87
					EN 29 23.39
					IS 14 11.29
					ES 8 6.45
				JUDGMENT EXTRAVERSION	ET 21 16.94
					EF 16 12.90
					IF 38 30.65
					IT 49 39.52
				JUDGMENT EXTRAVERSION	S dom 13 10.48
					N dom 51 41.13
					T dom 30 24.19
					F dom 30 24.19

Note: ■ = 1% of sample

8623101

Data collected by Donald W. MacKinnon at the Institute of Personality Assessment and Research, University of California, Berkeley during 1961. Subjects were males and a composite of three matched groups. The first group were 40 architects rated by a panel of experts as being highly creative. The second group were 43 architects who had at least two years experience and had been associated with one of the highly creative architects. The final group was composed of 41 architects none of whom had ever worked with any of the creative architects. All subjects in groups two and three were selected from the Directory of Architects (1965) and matched to group one with respect to age and geographic location of practice. These data are used with permission and were cited in:

MacKinnon, D. W. (1962). The nature and nurture of creative talent. American Psychologist, 17, 484-495.

Designers

N = 55

SENSING		INTUITION		N	%
THINKING	FEELING	FEELING	THINKING		
ISTJ N= 7 %= 12.73 ■■■■■■■■■■ ■■■	ISFJ N= 2 %= 3.64 ■■■■	INFJ N= 3 %= 5.45 ■■■■■	INTJ N= 4 %= 7.27 ■■■■■■■	JUDGMENT INTROVERSION	E 30 54.55
ISTP N= 1 %= 1.82 ■■	ISFP N= 2 %= 3.64 ■■■■	INFP N= 5 %= 9.09 ■■■■■■■■■	INTP N= 1 %= 1.82 ■■		I 25 45.45
ESTP N= 1 %= 1.82 ■■	ESFP N= 5 %= 9.09 ■■■■■■■■■	ENFP N= 6 %= 10.91 ■■■■■■■■■	ENTP N= 3 %= 5.45 ■■■■		S 23 41.82
ESTJ N= 2 %= 3.64 ■■■■■	ESFJ N= 3 %= 5.45 ■■■■■	ENFJ N= 5 %= 9.09 ■■■■■■■■■	ENTJ N= 5 %= 9.09 ■■■■■■■■■		N 32 58.18
				PERCEPTION EXTRAVERSION	T 24 43.64
					F 31 56.36
					J 31 56.36
					P 24 43.64
				JUDGMENT INTROVERSION	IJ 16 29.09
					IP 9 16.36
					EP 15 27.27
					EJ 15 27.27
				PERCEPTION EXTRAVERSION	ST 11 20.00
					SF 12 21.82
					NF 19 34.55
					NT 13 23.64
				JUDGMENT INTROVERSION	SJ 14 25.45
					SP 9 16.36
					NP 15 27.27
					NJ 17 30.91
				PERCEPTION EXTRAVERSION	TJ 18 32.73
					TP 6 10.91
					FP 18 32.73
					FJ 13 23.64
				JUDGMENT INTROVERSION	IN 13 23.64
					EN 19 34.55
					IS 12 21.82
					ES 11 20.00
				JUDGMENT INTROVERSION	ET 11 20.00
					EF 19 34.55
					IF 12 21.82
					IT 13 23.64
				JUDGMENT INTROVERSION	S dom 15 27.27
					N dom 16 29.09
					T dom 9 16.36
					F dom 15 27.27

Note: ■ = 1% of sample

8629401

This table is one of a series of tables from the CAPT-MBTI Data Bank of MBTI records submitted to CAPT for computer scoring between 1971 and June, 1984. This sample was drawn from 59,784 records with usable occupational codes from the total data bank of 232,557. This data bank has 51% Form F cases from 1971 to March, 1978, 34% Form F cases from 1978 to June, 1984 and 14% Form G cases from 1978 to December, 1983. An analysis of Form F and G data banks showed the data banks were comprised of 56% females and 44% males; education level completed: 6% some grade school, 30% high school diploma, 35% some college, 16% bachelor degrees, 11% masters degrees, 3% doctoral or post doctoral work, and 6% unknown. Age group percentages were: 11% under 18, 39% 18 to 20, 12% 21 to 24, 10% 25 to 29, 16% 30 to 39, 10% 40 to 49, 5% 50 to 59, 3% 60 plus, and 5% unknown.

VITA

Randall R. Russ

Candidate for the Degree of

Master of Science

**Thesis: THE RELATIONSHIP BETWEEN CREATIVITY, CAREER
ASPIRATIONS, AND PERSONALITY TYPES IN INTERIOR
DESIGN STUDENTS**

Major Field: Design, Housing and Merchandising

Biographical:

Personal Data: Born in Salina, Kansas, April 24, 1959, the son of Ronald and Donna Russ.

Education: Graduated from Wichita West High School, Wichita, Kansas, in May, 1977; received Bachelor of Science Degree in Interior Design from Kansas State University at Manhattan in May, 1986; completed requirements for the Master of Science degree at Oklahoma State University in May 1993.

Professional Experience: Interior Designer, Gilliam Design Associates, Stillwater, Oklahoma/Carefree, Arizona, July, 1986 to February, 1993; Teaching Assistant, Department of Design, Housing and Merchandising, Oklahoma State University, January, 1988 to December, 1989; Research Assistant, Research and Graduate Studies, January, 1992 to May, 1993.